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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,358

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EXAMINER

BERNSHTEYN, MICHAEL

ART UNIT

PAPER NUMBER

1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/530,358	Applicant(s) SUNAGAWA ET AL.	
	Examiner MICHAEL M. BERNSHTEYN	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/07/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action follows a response filed on December 7, 2007. Claim 1 has been amended; no claims have been cancelled or added.
2. Claims 2-7 are pending.

Claim Rejections - 35 USC § 103

3. The text of this section of Title 35 U.S.C. not included in this action can be found in a prior Office Action.
4. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable as obvious over Nakada (JP 2001-098145), for the rationale recited in paragraph 7 of Office Action dated on September 7, 2007, and comments below.
5. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito (JP 62-187756), for the rationale recited in paragraph 8 of Office Action dated on September 7, 2007, and comments below.
6. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deyrup et al. (U.S. Patent 4,912,167), for the rationale recited in paragraph 9 of Office Action dated on September 7, 2007, and comments below.

Response to Arguments

7. Applicant's arguments filed on December 7, 2007 have been fully considered but they are not persuasive.

8. In response to Applicants arguments that none of the cited references teaches or suggests this feature of the presently claimed invention (independent claim 2 is amended herein to recite that the viscosity modifier has a weight average molecular of 22,000 to 400,000), and thus, the cited references, taken alone or in combination, do not render the present invention obvious (page 4), and that Nakada recognizes "molecular weight over 20000 to be undesirable", which is completely contradictory to the present invention; that is, Nakada teaches away from the present invention *page 5, 2nd paragraph), it is note the following.

Firstly, Nakada discloses that the **number average molecular weight** of the polymer (B-I) has the desirable range of 1,000-20,000 (pages 3-4, [0018]-[0020]).

Applicants do not pay attention that the newly amended claim 1 recites "weight average molecular weight", and Nakada discloses **number average molecular weight**.

It is well known that due to polydispersity of the polymers, their weight average molecular weight is significantly more than number average molecular weight, and therefore, it is the examiner position to believe that Nakada's number average molecular weight is within the claimed range for weight average molecular weight.

Furthermore, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." ***In re Fulton***, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004). See also MPEP §2123.

9. Applicants contend that the present invention provides unexpectedly superior effects; namely, a surface gloss of not less than around 86 can be attained by specifying the molecular weight of the viscosity modifier as well as the ratio of (a)/(b). Particularly, when a viscosity modifier having a weight average molecular weight outside of the claimed molecular weight range of 22,000 to 400,000 is employed, such a high degree of gloss cannot be obtained as shown in the Examples of the present application. On the other hand, in Nakada there is no disclosure or suggestion that such a high gloss is attainable by the specified molecular weight as well as the above ratio of (a)/(b)(pages 4-5).

10. It is noted that there is no meaningful correlation between the Applicants claimed molecular weight range of 22,000 to 400,000 and the surface gloss of molded article. For example, the surface gloss of 84.2 can be obtained using the polymer having molecular weight of 5,000 (example 12) and the polymer having molecular weight of 22,000 (example 19). Thus, from applicants' own examples, one can see that the MWT does not appear to have a direct correlation with any claimed surface gloss value.

Furthermore, it is not clear the criticality of the value 86 for the surface gloss of molded article. Applicants did not show why, for example, the value of 84.2 is not sufficient for the surface gloss although the above mentioned polymer (example 19) having molecular weight of 22,000 (which is within the claimed range) has exactly this value. Therefore, in the absence of showing the criticality it is not clear why the Applicants considered the claimed range of the molecular weight for the viscosity

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modifier of 22,000 to 400,000 as providing "unexpectedly superior effects" (page 4, the last paragraph)?

11. As to Applicants arguments that Examiner's position that "the ratio of (a)/(b) and the specified molecular weight range result-effective variables for viscosity modifier and that they are the optimum or workable ranges by routine experimentation" is not reasonable since none of the cited references recognize the advantageous effects of this element of the invention (page 5, the last paragraph), it is noted that with respect to epoxide group-containing polymer, the skilled artisan would have recognized that the claimed weight ratio of unit (a) and (b) are result-effective variables for viscosity modifier. In light of this, it has been found that, "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation," *In re Aller*, 220 F.2d 454,456, 105 USPQ 233,235 (CCPA 1955); and, "a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation," *In re Boesch*, 617 F.2d 272,205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the claimed weight ratio of units (a) and (b) in the teaching of Saito and Deyrup because optimization of such result-effective variables ensures proper process-ability and properties of the viscosity modifier.

It is worth to mention that Applicants recite “the ratio of (a)/(b)”, which was not disclosed in the claims and specification, instead of “ratio of (a) and (b)” which was recited by the Examiner.

12. Regarding Applicants arguments that in Saito, filler and a halogen-containing flame retardant or a Sb compound are the essential ingredients, and in Deyrup, a source of catalytic cations is the essential ingredient, thus the subject matter of Saito and Deyrup are different from the present invention and one of ordinary skill in the art would not have been motivated to combine the reference with a reasonable expectation of success (page 6, 1st paragraph) it is noted that Saito discloses a thermoplastic polyester resin composition 100 pts. wt. in total, comprising 50-99.9 wt% of polyethylene terephthalate (A) composed of at least 80 mol% of ethylene terephthalate units, and 0.01-50 wt% of vinyl copolymer (B) having at least 5 mol% of glycidyl methacrylate units (e.g., a glycidyl methacrylate/methyl methacrylate copolymer (abstract). Therefore, filler and a halogen-containing flame retardant or a Sb compound cannot be considered as the essential ingredients.

Deyrup discloses a blow moldable composition of polyester, an epoxide polymer and a source of catalytic cations (abstract). It is worth to mention that for the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, “consisting essentially of” will be construed as equivalent to “comprising.” (see, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355). See MPEP 2111.03.

Therefore, Deyrup's reference can be used for all that it teaches, not just the subjecting assumption of what the Applicants think might be "critical" in the invention.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSHTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael M. Bernshteyn/
Examiner, Art Unit 1796

/M. M. B./

Examiner, Art Unit 1796

/Randy Gulakowski/

Supervisory Patent Examiner, Art Unit 1796

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